AIR PERMIT ROUTING/APPROVAL SLIP-Permits

12-14-16

AI No.	4634	**Company**	LOOP LLC	**Date Received**	6/10/2016
Activity No.	PER20160002	**Facility**	~~Deepwater~~ Port Complex	**Permit Type**	
CDS No.	1560-00027	**Permit No.**	PSD-LA-796 (M-1)	**Expedited Permit**	☒ yes ☐ no

1. Technical Review	**Approved**	**Date rec'd**	**Date FW**	**Comments**
Permit Writer	qmf		9/19/16	
Air Quality / Modeling				
Toxics				
Technical Advisor	Dan		9/19/16	
Supervisor				
Other				
2. Management Review (if PN req'd)	**Approved**	**Date rec'd**	**Date FW**	**Comments**
Supervisor				
Manager	qmf		9/26/16	
Assistant Secretary (PN)	ERS		9/27/16	DT 9/27/16
3. Response to Comments (if PN req'd)	**Approved**	**Date rec'd**	**Date FW**	**Comments**
Supervisor				
Manager				
Administrator				
Legal (BFD)				
4. Final Approval	**Approved**	**Date rec'd**	**Date FW**	**Comments**
Supervisor				
Manager	qmf		11/21/16	No comments were received
Administrator	DT		11/21/16	
Assistant Secretary				signed 11/21/16

1. Technical Review

PN of App needed	☐ yes ☐ no	Date of PN of App		Newspaper	
Fee paid	☐ yes ☑ no				
NSPS applies	☐ yes ☐ no	PSD/NNSR applies	☐ yes ☐ no	NESHAP applies	☐ yes ☐ no

2. Post-Technical Review

Company technical review	☑ yes ☐ no ☐ n/a	E-mail date	9/19/16	Remarks received	☐ yes ☑ no
Surveillance technical review	☑ yes ☐ no ☐ n/a	E-mail date	9/19/16	Remarks received	☐ yes ☑ no

3. Public Notice

Public Notice Required	☑ yes ☐ no				
Library	Lafourch Parish Lib – South Lafourch Branch				
PN newspaper 1/City	*The Advocate*/Baton Rouge	PN Date	10/5/16	EDMS Verification	☑ yes ☐ no
PN newspaper 2/City	The Lafourch Gazette	PN Date	10/5/16		☑ yes ☐ no
Company notification letter sent	Date mailed	9/30/16			
EPA PN notification e-mail sent	Date e-mailed	9/3/16			
OES PN mailout	Date	10/3/16			

4. Final Review

Public comments received	☐ yes ☑ no	EPA comments rec'd	☐ yes ☑ no	Date EPA Resp. to Comments-mailed	
Company comments received	☐ yes ☑ no	PN info entered into Permit Sec VI	☑ yes ☐ no	Date EPA approved permit	11/19/16
Comments					

JOHN BEL EDWARDS
GOVERNOR

CHUCK CARR BROWN, PH.D.
SECRETARY

State of Louisiana

DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

Certified Mail No.: 7004 2510 0006 3856 9369

Agency Interest (AI) No.: 4634
Activity No.: PER20160002

Mr. Chris A. Labat
Vice President of Engineering and Technology
LOOP LLC
137 Northpark Boulevard
Covington, Louisiana 70433

RE: Prevention of Significant Deterioration (PSD) Permit PSD-LA-796 (M-1)
LOOP Port Complex, LOOP LLC
Cut Off, Lafourche Parish, Louisiana

Dear Mr. Labat:

Enclosed is your permit, PSD-LA-796 (M-1).

Please be advised that pursuant to provisions of the Environmental Quality Act and the Administrative Procedure Act, the Department may initiate review of a permit during its term. However, before it takes any action to modify, suspend or revoke a permit, the Department shall, in accordance with applicable statutes and regulations, notify the permittee by mail of the facts or operational conduct that warrant the intended action and provide the permittee with the opportunity to demonstrate compliance with all lawful requirements for the retention of the effective permit.

Should you have any questions, contact Dr. Qingming Zhang of the Air Permits Division at (225) 219-3457.

Sincerely,

Elliott B. Vega
Assistant Secretary

11/21/16
Date

EBV:qmz

c: US EPA Region VI

Agency Interest No. 4634

PSD-LA-796 (M-1)

AUTHORIZATION TO CONSTRUCT AND OPERATE A MODIFIED MAJOR SOURCE PURSUANT TO THE PREVENTION OF SIGNIFICANT DETERIORATION REGULATIONS IN LOUISIANA ENVIRONMENTAL REGULATORY CODE, LAC 33:III.509

In accordance with the provisions of the Louisiana Environmental Regulatory Code, LAC 33:III.509,

LOOP LLC
137 Northpark Boulevard
Covington, Louisiana 70433

is authorized to construct the tank project at the LOOP Port Complex at

224 East 101st Place
Cut Off, Louisiana 70345

subject to the emissions limitations, monitoring requirements, and other conditions set forth hereinafter.

This permit and authorization to construct shall expire at midnight on May 21, , 2018, unless physical on site construction has begun by such date, or binding agreements or contractual obligations to undertake a program of construction of the source are entered into by such date.

Signed this 21st day of November, 2016.

Elliott B. Vega
Assistant Secretary
Office of Environmental Services
Louisiana Department of Environmental Quality

BRIEFING SHEET

LOOP Port Complex
Agency Interest No. 4634
LOOP LLC
Cut Off, Lafourche Parish, Louisiana
PSD-LA-796 (M-1)

PURPOSE

In addition to six (6) crude oil storage tanks proposed previously for the Clovelly Dome Storage Terminal expansion project, five (5) more crude oil storage tanks are proposed for the project with this permit modification.

RECOMMENDATION

Approval of the proposed construction and issuance of a permit modification.

REVIEWING AGENCY

Louisiana Department of Environmental Quality, Office of Environmental Services, Air Permits Division.

PROJECT DESCRIPTION

The Clovelly Dome Storage Terminal expansion project was initially proposed in LOOP's December 2014 permit application to add six (6) crude oil storage tanks to the terminal. The project was approved on July 30, 2015 under the Part 70 Operating Permit No. 1560-00027-V1 and PSD Permit No. PSD-LA-796.

With this permit modification, LOOP proposes to add an additional five (5) crude oil storage tanks, one (1) with a capacity of 371,000 barrels and four (4) with a capacity of 600,000 barrels each. All eleven (11) new tanks will be equipped with external floating roofs (EFRs). The overall tank capacity at the terminal will be increased from 9 million barrels to approximately 14 million barrels. The oil throughput at the terminal will increase from 182.5 million barrels per year to 250 million barrels per year.

TYPE OF REVIEW

This permit was reviewed in accordance with regulations for the Prevention of Significant Deterioration (PSD) for emissions of VOC. The selection of control technologies are based on the BACT analysis.

BEST AVAILABLE CONTROL TECHNOLOGY

VOC emissions are above PSD significance level and must undergo PSD analyses. The selection of control technology was based on the BACT analysis using a "top down" approach. BACT for all affected crude oil storage tanks (EQT048 through EQT058) is determined to be external floating roofs meeting the requirements of 40 CFR 60 Subpart Kb. BACT for storage tank landings is to comply with requirements of 40 CFR 60.112b(a)(2)(iii) during each roof landing event. BACT for storage tank cleaning is to limit the amount of time between the cessation of pumping out product and the start of liquid heel and sludge removal from the tank floor during floating roof cleaning and to use a thermal oxidation device to control emissions from the tank cleaning operations.

BRIEFING SHEET

LOOP Port Complex
Agency Interest No. 4634
LOOP LLC
Cut Off, Lafourche Parish, Louisiana
PSD-LA-796 (M-1)

AIR QUALITY IMPACT ANALYSIS

Prevention of Significant Deterioration regulations require an analysis of ambient air quality for those pollutants emitted in significant amounts from a proposed major modification.

VOC emissions from the proposed facility will exceed 100 tons per year; therefore, an ambient air quality analysis and preconstruction monitoring are required for ozone. Based on the proposed site's proximity to an existing LDEQ ozone monitor in Thibodaux, Lafourche Parish, LA (AQS Site ID: 22-057-0004) and the meteorological factors that indicate this data is representative of existing air quality conditions at the proposed site, a waiver for preconstruction monitoring was granted. This monitoring station is approximately 38 miles north-west of the site location. The prevailing wind from the site is towards this monitor (from the southeast). For post-construction monitoring, LDEQ has approved the use of the Thibodaux, Lafourche Parish, LA ozone monitor.

ADDITIONAL IMPACTS

Soils, vegetation, and visibility will not be adversely impacted by the proposed facility, nor will any Class I area be affected. The project will not result in any significant secondary growth effects. No new permanent jobs will be created.

PROCESSING TIME

Application Dated:	June 10, 2016
Application Received:	June 10, 2016
Additional Information Dated:	September 15, 16 and 23, 2016
Effective Completeness Date:	September 19, 2016

PUBLIC NOTICE

A notice requesting public comment on the permit was published in *The Advocate*, Baton Rouge, and in *The Lafourche Gazette*, Larose, on October 5, 2016. A copy of the public notice was mailed to concerned citizens listed in the Office of Environmental Services Public Notice Mailing List on October 3, 2016. The draft permit was also submitted to US EPA Region VI on September 30, 2016. No comments were received.

PRELIMINARY DETERMINATION SUMMARY

LOOP Port Complex
Agency Interest No. 4634
LOOP LLC
Cut Off, Lafourche Parish, Louisiana
PSD-LA-796 (M-1)
June 5, 2015, Updated September 19, 2016

I. APPLICANT

LOOP LLC
137 Northpark Boulevard
Covington, Louisiana 70433

II. LOCATION

The LOOP Port Complex consists of the Clovelly Dome Storage Terminal in Cut Off, the Small Boat Harbor in Leeville, the Fourchon Booster Station in Leeville, and the Marine Offloading Terminal in Grand Isle Block 59 of the Gulf of Mexico. The Clovelly Dome Storage Terminal is located at 224 East 101st Place in Cut Off, Louisiana. Approximate UTM coordinates are 764,302 kilometers East and 3,261,267 kilometers North in Zone 15.

III. PROJECT DESCRIPTION

The Clovelly Dome Storage Terminal expansion project was initially proposed in LOOP's December 2014 permit application to add six (6) crude oil storage tanks to the terminal. The project was approved on July 30, 2015 under the Part 70 Operating Permit No. 1560-00027-V1 and PSD Permit No. PSD-LA-796.

With this permit modification, LOOP proposes to add an additional five (5) crude oil storage tanks, one (1) with a capacity of 371,000 barrels and four (4) with a capacity of 600,000 barrels each. All eleven (11) new tanks will be equipped with external floating roofs (EFRs). The overall tank capacity at the terminal will be increased from 9 million barrels to approximately 14 million barrels. The oil throughput at the terminal will increase from 182.5 million barrels per year to 250 million barrels per year.

Potential emissions from the entire LOOP Port Complex (including emissions from GC XVII and insignificant activities), in tons per year, are:

PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO	VOC	CO_2e
0.56	0.56	0.44	11.73	3.08	418.26	1,469

Except for VOC, potential emissions from the entire complex for any other PSD regulated pollutant are below PSD significance level. Therefore, it is not required to conduct PSD analyses for any PSD pollutant other than VOC.

VOC emission increase due to the Clovelly Dome Storage Terminal expansion project is over the PSD significance level (40 TPY) and there are no contemporaneous emission changes from the facility. Therefore, as determined previously in the initial PSD Permit PSD-LA-796, the Clovelly Dome Storage Terminal expansion project is subject to PSD review for VOC emissions.

IV. SOURCE IMPACT ANALYSIS

A proposed net increase in the emission rate of a regulated pollutant above de minimis levels for new major or modified major stationary sources requires review under Prevention of

Significant Deterioration regulations, 40 CFR 52.21. PSD review entails the following analyses:

A. A determination of the Best Available Control Technology (BACT);

B. An analysis of the existing air quality and a determination of whether or not preconstruction or postconstruction monitoring will be required;

C. An analysis of the source's impact on total air quality to ensure compliance with the National Ambient Air Quality Standards (NAAQS);

D. An analysis of the PSD increment consumption;

E. An analysis of the source related growth impacts;

F. An analysis of source related growth impacts on soils, vegetation, and visibility;

G. A Class I Area impact analysis; and

H. An analysis of the impact of toxic compound emissions.

A. BEST AVAILABLE CONTROL TECHNOLOGY

Under current PSD regulations, an analysis of "top down" BACT is required for the control of each regulated pollutant emitted from a modified major stationary in excess of the specified significant emission rates. The top down approach to the BACT process involves determining the most stringent control technique available for a similar or identical source. If it can be shown that this level of control is infeasible based on technical, environmental, energy, and/or cost considerations, then it is rejected and the next most stringent level of control is determined and similarly evaluated. This process continues until a control level is arrived at which cannot be eliminated for any technical, environmental, or economic reason. A technically feasible control strategy is one that has been demonstrated to function efficiently on identical or similar processes. Additionally, BACT shall not result in emissions of any pollutant which would exceed any applicable standard under 40 CFR Parts 60 and 61.

For this project, BACT analyses are required for VOC emissions from the project.

BACT analyses for VOC emissions from storage tanks

Affected Sources:
22-14, Tank 6413 (Clovelly Dome) EQT048
23-14, Tank 6415 (Clovelly Dome) EQT049
24-14, Tank 6418 (Clovelly Dome) EQT050
25-14, Tank 6419 (Clovelly Dome) EQT051
26-14, Tank 6420 (Clovelly Dome) EQT052
27-14, Tank 6421 (Clovelly Dome) EQT053
28-16, Tank 6422 (Clovelly Dome) EQT054

29-16, Tank 6423 (Clovelly Dome) EQT055
30-16, Tank 6424 (Clovelly Dome) EQT056
31-16, Tank 6425 (Clovelly Dome) EQT057
32-16, Tank 6426 (Clovelly Dome) EQT058

Potentially Applicable Technology

Control strategies that could potentially be employed to control VOC emissions from storage vessels include:

- Fixed roof tanks
- External floating roof tanks
- Internal floating roof tanks
- Closed vent system and control device

Fixed Roof (FR)

A FR tank consists of a cylindrical steel shell with a permanently affixed roof, which may vary in design from cone or dome shaped to flat. Emission losses from FR tanks are caused by changes in temperature, pressure, and liquid level changes. FR tanks are either freely vented or equipped with a pressure/vacuum vent. The latter allows the tanks to operate at a slight internal pressure or vacuum to prevent the release of vapors during very small changes in temperature, pressure or liquid level changes.

External Floating Roof (EFR)

An EFR tank consists of an open-topped cylindrical steel shell equipped with a roof that floats on the surface of the stored liquid. The floating roof consists of a deck, fittings, and a rim seal system. Floating decks are constructed of a welded steel plate and are of two general types: platoon or double deck. With all EFR tanks, the roof rises and falls with liquid level in the tank. External floating decks are equipped with a rim seal system, which is attached to the deck perimeter and contacts the tank wall. The purpose of the floating roof and rim seal system is to reduce evaporative loss of the stored liquid. Some annular space remains between the seal system and the tank wall. The seal system slides against the tank wall as the roof is raised and lowered. The floating deck is also equipped with fittings that penetrate the deck and serve operational functions. The EFR design is such that evaporative losses from the stored liquid are limited to losses from the rim seal system and deck fittings (standing storage losses) and any exposed liquid on the tank walls (withdrawal losses).

Internal Floating Roof (IFR)

An IFR tank has both a permanent fixed roof and a floating roof inside. The function of the fixed roof is not to act as a vapor barrier, but to block the wind. The deck in IFR tank rises and falls with the liquid level and either floats directly on the liquid surface (contact deck), or rests on pontoons several inches above the liquid surface (noncontact deck). An IFR roof minimizes evaporative losses of the stored liquid. Both contact and noncontact decks incorporate rim seals and deck fittings for the same purposes as for EFR tanks. Evaporative losses from

floating roofs originate from deck fittings, nonwelded deck seams, and the annular space between the deck and tank wall. In addition, these tanks are freely vented by circulations vents at the top of the fixed roof. The vents minimize the possibility of organic vapors approaching the flammable range.

Closed Vent System (CVS) and Control Device

A fixed roof can be controlled by connecting its vent to a header routed to a control device, such as a flare, thermal oxidizer, or carbon adsorption system.

All identified technologies are technically feasible.

In general, a closed vent system and control device, an IFR, and an EFR are considered top control alternatives for storage vessels in a BACT analysis, though an IFR is often preferred to an EFR for new construction due to its ability to eliminate wind losses. Control requirements are dependent on the storage vessel size and the vapor pressure of the product stored. LOOP is proposing to build eleven (11) new crude oil storage tanks with a Reid vapor pressure of 8 psi. 40 CFR 60 Subpart Kb and LAC 33:III.2103 both stipulate that the combination of tank size and vapor pressure require either an EFR, IFR, or closed vent system with control.

A flare associated with a fixed roof would only have a 98% control efficiency, while EFR and IFR have control efficiencies of at least 99%.

It has been noted that a CVS has been demonstrated for the control of emissions from storage tanks with fixed roofs and that a common control device could be used for all tanks operated. The use of a flare or other means of destruction of VOC emissions for tanks is common in industry. However, for crude oil storage, fixed roof tanks are not common in use and represent a very inefficient way to store product as losses are very high and result in unnecessary secondary emissions. The project proposes the EFR tanks for crude oil storage. As a result, the project is for the construction of floating roof tanks and not for the construction of fixed roof tanks. Without an enclosure such as a fixed roof tank to collect and vent vapors to a control device, the option of a CVS has to add additional roofs, which is not the project specification and is not cost effective based on information provided by the applicant.

Internal Floating Roof versus External Floating Roof Options

If an internal floating roof tank is used for emission control, capital cost, installation and operation of an IFR should be evaluated compared to the proposed EFR tank option. IFR and EFR tanks have many similarities affecting cost of the tank, including the shell, floor, and floating roof, etc. The most notable difference on an IFR tank, as compared to an EFR tank, is the addition of a roof over the tank typically made of plate steel. Assuming the difference in capital cost of the IFR to be only the addition of that plate steel roof, the extra cost would be $255,664 for just the plate (for a 371,000-bbl tank), not including transportation, erection or support columns. As noted previously, each EFR tank is projected to have 4.33 tpy of VOC emissions. An IFR tank would only have emissions of 1.46 tpy, resulting in an emission reduction of 2.87 tpy. Applying a capital recovery factor representing 7% interest over 10 years life expectancy, the resulting cost effectiveness is $12,685 per ton of VOC reduction,

which is not cost effective. Also note that this cost effectiveness does not include any other cost typically associated with a BACT cost analysis which would be incurred. Therefore, an IFR control option is considered economically infeasible.

Based on the analysis presented above and a review of EPA's RACT/BACT/LAER Clearinghouse for similar crude oil storage tanks, it is determined that external floating roofs (EFRs) meeting 40 CFR part 60 Subpart Kb represent BACT for VOC emissions.

BACT analyses for VOC emissions from tank roof landings

Affected Sources:
22-14, Tank 6413 (Clovelly Dome) EQT048
23-14, Tank 6415 (Clovelly Dome) EQT049
24-14, Tank 6418 (Clovelly Dome) EQT050
25-14, Tank 6419 (Clovelly Dome) EQT051
26-14, Tank 6420 (Clovelly Dome) EQT052
27-14, Tank 6421 (Clovelly Dome) EQT053
28-16, Tank 6422 (Clovelly Dome) EQT054
29-16, Tank 6423 (Clovelly Dome) EQT055
30-16, Tank 6424 (Clovelly Dome) EQT056
31-16, Tank 6425 (Clovelly Dome) EQT057
32-16, Tank 6426 (Clovelly Dome) EQT058

Potentially Applicable Technology

Control strategies that could potentially be employed to control VOC emissions from landing of floating roofs include:

- Limiting the duration that a floating roof is landed
- Closed vent system and control device

Limiting the Duration

In the case of a floating roof landing (land and refill), limiting the amount of time during the process of filling, emptying, or refilling when the roof is resting on the leg supports will reduce emissions from roof landing events. The affected tanks are subject to the requirement of 40 CFR 60.112b(a)(2)(iii): the process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.

Closed Vent System and Control Device.

Installing a system of vapor collection from an external floating roof to capture and transport the vapors while it is positioned on the roof legs is not practical and has not been previously demonstrated. To capture the vapors would require an IFR tank with the previously discussed costs of $255,664 for the plate for the roofing. (Note that this cost is for each 371,000-bbl tank. The corresponding cost for each 600,000-bbl tank is higher.) Combining the cost of the quoted John Zink Flare, the total additional cost for the roofing and flare would be at least $1,534,456,

not including the engineering and installation of a capture system that can route vapors properly both during normal storage operation and tank landings. The annualized cost is $471,667 or higher. Each proposed EFR tank is projected to have landing emissions of 13.8 tpy or less. Applying the 98% control, the reduction would equate to 13.52 tpy from all landing events on a per tank basis. Thus the CVS plus flare option yields a cost effectiveness of at least $34,882 per ton of VOC controlled. Use of a flare would also require a pilot gas and would generate additional criteria pollutants such as NO_X and CO. Due to economic, environmental, energy impacts and cost, an IFR tank control option with CVS and flare is considered to be infeasible for controlling floating roof tank landing emissions.

BACT is determined to complying with requirements of 40 CFR 60.112b(a)(2)(iii) during each roof landing event.

BACT analyses for VOC emissions from tank cleanings

Affected Sources:
22-14, Tank 6413 (Clovelly Dome) EQT048
23-14, Tank 6415 (Clovelly Dome) EQT049
24-14, Tank 6418 (Clovelly Dome) EQT050
25-14, Tank 6419 (Clovelly Dome) EQT051
26-14, Tank 6420 (Clovelly Dome) EQT052
27-14, Tank 6421 (Clovelly Dome) EQT053
28-16, Tank 6422 (Clovelly Dome) EQT054
29-16, Tank 6423 (Clovelly Dome) EQT055
30-16, Tank 6424 (Clovelly Dome) EQT056
31-16, Tank 6425 (Clovelly Dome) EQT057
32-16, Tank 6426 (Clovelly Dome) EQT058

Potentially Applicable Technology

Control strategies that could potentially be employed to control VOC emissions from tank cleanings include:

- Limiting the duration that before removing liquid heels and sludge from the tank bottom after pump out ceases
- Closed vent system and control device

Limiting the Duration

In the case of a tank cleaning, limiting the amount of time between the cessation of pumping out product and the start of liquid heel and sludge removal from the tank floor will reduce the amount of vapors that accumulate under the tank roof that add to the emissions that result when the tank is subsequently degassed prior to cleaning.

Closed Vent System and Control Device

LOOP proposes to control emissions from tank cleaning operations (degassing and cleaning activities) with a portable thermal oxidizer with a control efficiency of 98%. LOOP contracts third party suppliers to perform tank cleanings and will contractually require the use of a thermal oxidization device achieving a minimum 98% control efficiency.

BACT is limiting the amount of time between the cessation of pumping out product and the start of liquid heel and sludge removal from the tank floor during floating roof cleaning and using a thermal oxidation device to control emissions from the tank cleaning operations.

B. ANALYSIS OF AMBIENT AIR QUALITY

Prevention of Significant Deterioration regulations require an analysis of ambient air quality for those pollutants to be emitted in significant amounts from a proposed major modification. VOCs are pollutants of concern in this case.

VOC emissions from the proposed facility will exceed 100 tons per year; therefore, an ambient air quality analysis and preconstruction monitoring are required for ozone. Based on the proposed site's proximity to an existing LDEQ ozone monitor in Thibodaux, Lafourche Parish, LA (AQS Site ID: 22-057-0004) and the meteorological factors that indicate this data is representative of existing air quality conditions at the proposed site, a waiver for preconstruction monitoring was granted. This monitoring station is approximately 38 miles north-west of the site location. The prevailing wind from the site is towards this monitor (from the southeast). For post-construction monitoring, LDEQ has approved the use of the Thibodaux, Lafourche Parish, LA ozone monitor.

Qualitative ozone impact analysis, based on the VOC emission increases associated with the project relative to the overall VOC emission in the surrounding areas and the downward trend in ozone levels, was performed and concluded that the Clovelly Dome Storage Terminal expansion project would have no impact on ozone.

C. NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS) ANALYSIS

As mentioned above, qualitative ozone impact analysis was performed and concluded that the Clovelly Dome Storage Terminal expansion project would have no impact on ozone.

D. PSD INCREMENT ANALYSIS

Qualitative ozone impact analysis was performed. PSD increment modeling was not required.

E. SOURCE RELATED GROWTH IMPACTS

Operation of this facility is not expected to have any significant effect on residential growth or industrial/commercial development in the area of the facility. No significant net change in employment, population, or housing will be associated with the project. As a result, there will not be any significant increases in pollutant emissions indirectly associated with LOOP LLC's

proposal. Secondary growth effects will include 15 temporary construction related jobs and 0 permanent jobs.

F. SOILS, VEGETATION, AND VISIBILITY IMPACTS

There will be no significant impact on area soils, vegetation, or visibility.

G. CLASS I AREA IMPACTS

Louisiana's Breton Wildlife Refuge the nearest Class I area, is about 60 kilometers from the site. As such, an ozone impact analysis, including the gathering of ambient air quality data was conducted. An existing LDEQ ozone monitor in Thibodaux, Lafourche Parish, LA (AQS Site ID: 22-057-0004) was selected. The monitor is approximately 38 miles north-west and the prevailing wind from the site is towards this monitor (from the southeast). These meteorological factors indicate this data is representative of existing air quality conditions at the proposed site. Data from the monitor indicates that the NAAQS ozone level is not exceeded, and the area is currently classified as in attainment. A review of the historical ozone concentration data from the last decade shows a slight downward trend, indicating overall positive movement toward continued compliance with the ozone standard. Additional VOC emission data was collected from multiple parishes surrounding the facility's location. The proposed VOC increase from the facility is approximately only a 3.24% increase. Based upon this analysis, the proposed project will have no significant impact on ozone levels in and around the facility.

H. TOXIC EMISSIONS IMPACT

The selection of control technology based on the BACT analysis included consideration of control of toxic emissions.

V. CONCLUSION

The Air Permits Division has made a preliminary determination to approve the construction of the tank project at the LOOP Port Complex near Cut Off in Lafourche Parish, Louisiana, subject to the attached specific and general conditions. In the event of a discrepancy in the provisions found in the application and those in this Preliminary Determination Summary, the Preliminary Determination Summary shall prevail.

SPECIFIC CONDITIONS

LOOP Port Complex
Agency Interest No. 4634
LOOP LLC
Cut Off, Lafourche Parish, Louisiana
PSD-LA-796 (M-1)

1. Comply with the Louisiana General Conditions as set forth in LAC 33:III.537. [LAC 33:III.537]

2. The permittee is authorized to operate in conformity with the specifications submitted to the Louisiana Department of Environmental Quality (LDEQ) as analyzed in LDEQ's document entitled "Preliminary Determination Summary", and subject to the following emissions limitations and other specified conditions. Specifications submitted are contained in the applications and additional information for PSD Permit PSD-LA-796 and subsequent modifications.

3. BACT Determination:

ID No.	Description	Activities	VOC BACT
EQT048	22-14, Tank 6413 (Clovelly Dome)	Normal Operation	Equip tanks with External Floating Roofs that meet requirements of 40 CFR 60 Subpart Kb.
EQT049	23-14, Tank 6415 (Clovelly Dome)		
EQT050	24-14, Tank 6418 (Clovelly Dome)		
EQT051	25-14, Tank 6419 (Clovelly Dome)	Tank Landings	Comply with requirements of 40 CFR 60.112b(a)(2)(iii) during each roof landing event.
EQT052	26-14, Tank 6420 (Clovelly Dome)		
EQT053	27-14, Tank 6421 (Clovelly Dome)		
EQT054	28-16, Tank 6422 (Clovelly Dome)	Tank Cleanings	Limit the amount of time between the cessation of pumping out product and the start of liquid heel and sludge removal from the tank floor during floating roof cleaning and use a thermal oxidation device to control emissions from the tank cleaning operations for each cleaning event.
EQT055	29-16, Tank 6423 (Clovelly Dome)		
EQT056	30-16, Tank 6424 (Clovelly Dome)		
EQT057	31-16, Tank 6425 (Clovelly Dome)		
EQT058	32-16, Tank 6426 (Clovelly Dome)		

TABLE I: BACT COST SUMMARY

LOOP Port Complex
Agency Interest No. 4634
LOOP LLC
Cut Off, Lafourche Parish, Louisiana
PSD-LA-796 (M-1)

Control Alternatives		Availability/ Feasibility	Negative Impacts (a)	Control Efficiency	Emissions Reduction (TPY)	Capital Cost ($)	Annualized Cost ($)	Cost Effectiveness ($/ton)	Notes
Clovelly Dome tanks (EQT0048-EQT0058)									
VOC	Internal Floating Roof design (versus External Floating Roof)	Yes/No	1	99%	2.87	255,664*	36,400	12,685	Rejected
	Closed Vent System for landing operations	Yes/No	1, 2 & 3	98%	13.52	2,387,959	471,667	34,882	Rejected

Notes: a) Negative impacts: 1) economic, 2) environmental, 3) energy, 4) safety

* Cost of plate for a 371,000-bbl tank